

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

| | | |
|---|---|--|
| Applicant's or agent's file reference P450869 KJR | FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below. | |
| International application No. PCT/NZ01/00228 | International filing date (<i>day/month/year</i>) 16 October 2001 | (Earliest) Priority Date (<i>day/month/year</i>) 17 October 2000 |
| Applicant DIATRANZ LIMITED et al | | |

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of **4** sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (See Box II).

4. With regard to the **title**, ☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**, ☒ The text is approved as submitted by the applicant

☐ The text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☐ As suggested by the applicant.

☐ Because the applicant failed to suggest a figure

☐ Because this figure better characterizes the invention

☒ None of the figures

INTERNATIONAL SEARCH REPORT

International application No.

PCT/NZ01/00228

A. CLASSIFICATION OF SUBJECT MATTERInt. Cl. ⁷: A61K 35/39, A61P 3/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC AS ABOVE

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

AU: IPC AS ABOVE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Chemical Abstracts, WPAT, MEDLINE: porcine/pig*/swine, islet/langerhans/pancreas, sertoli, insulin

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|-----------------------|
| Y | London N.J. et al "A simple method for the release of islets by controlled collagenase digestion of the human pancreas" Transplantation 49 (6) pp1109-13, (June 1990) | 1, 12, 16, 53 |
| Y | Selawry, H.P. et al "Sertoli cell-enriched fractions in successful islet cell transplantation" Cell Transplantation 2 pp123-129. See abstract, Results, Discussion (1993) | 1, 12, 16, 53, |
| X | Korburt, G.S. et al "Cotransplantation of allogenic islets with allogenic testicular cell aggregates allows long-term graft survival without systemic immunosuppression" Diabetes 46 pp317-322 (February 1997) | 1, 12, 16, 53 |

☒ Further documents are listed in the continuation of Box C ☒ See patent family annex

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

26 February 2002

Date of mailing of the international search report

11 MAR 2002

Name and mailing address of the ISA/AU

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/NZ01/00228

| C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT | | |
|---|--|-----------------------|
| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| Y | Rayat, G.R. et al "Potential application of neonatal porcine islets as treatment for type 1 diabetes: a review" Annals of the New York Academy of Sciences 875 pp175-188 (18 June 1999) | 1-4, 12, 17, 18, 53 |
| P, Y | Suarez-Pinzon, W. et al "Testicular Sertoli cells protect islet beta-cells from autoimmune destruction in NOD mice by a transforming growth factor-beta1-dependent mechanism" Diabetes 49 pp1810-1818 (November 2000) | 1, 12, 53 |
| P, Y | Luca, G. et al, "Sertoli cell-induced reversal of adult rat pancreatic islet beta-cells into fetal-like status: potential implications for islet transplantation in type 1 diabetes mellitus" Journal of Investig. Medicine 48 (6) pp441-448 November 2000 | 1, 12, 36, 53 |
| Y | Selawry, H.P. et al "Sertoli cell-induced effects on functional and structural characteristics of isolated neonatal porcine islets" Cell Transplantation 5 (5) pp517-524 (1996) | 1-4, 12, 44, 53 |
| A | Calafiore, R. et al "Transplantation of pancreatic islets contained in minimal volume microcapsules in diabetic high mammals" Annals of the New York Academy of Sciences" 875 pp219-232 (1999) | |
| A | AU 81864/98 A (Diatranz Limited) (11 March 1999) | |
| P, A | US 6146653 A (Diatranz Limited) (14 November 2000) | |

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/NZ01/00228

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

| Patent Document Cited in Search Report | | | | Patent Family Member | |
|---|----------|------|---------|----------------------|--------|
| US | 6146653 | US | 6090400 | NZ | 250834 |
| AU | 81864/98 | NONE | | | |
| END OF ANNEX | | | | | |